

AMENDMENTS TO THE CLAIMS

The following is a complete, marked-up listing of revised claims with a status identifier in parenthesis, underlined text indicating insertions, and strike through and/or double-bracketed text indicating deletions.

LISTING OF CLAIMS

1. (Currently Amended) Method for providing a shaped biodegradable elastomeric structure, comprising:

forming at least one of homopolymers and copolymers of 1,3-trimethylene carbonate (TMC) into a desired shape; and

irradiating said desired shape with actinic radiation in an inert atmosphere for crosslinking,

wherein the copolymer of 1,3-trimethylene carbonate (TMC) is chosen from the group consisting of 1,3-trimethylene carbonate (TMC) (co)polymers with polyethylene oxide (PEO), polyethylene glycol (PEG) and -caprolactone (CL).

2. (Previously Presented) Method according to claim 1, wherein the at least one of the homopolymer and copolymer of 1,3-trimethylene carbonate (TMC) includes a number average molecular weight (M_n) greater than 10,000.

3. (Previously Presented) Method according to claim 1, wherein the copolymer of 1,3-trimethylene carbonate (TMC) is chosen from the group consisting of 1,3-trimethylene carbonate (TMC) (co)polymers with lactones, cyclic carbonates, cyclic ethers, cyclic anhydrides, and cyclic depsipeptides.

4. (Previously Presented) Method according to claim 1, wherein the copolymer of 1,3-trimethylene carbonate (TMC) is chosen from the group consisting of a statistical copolymer, a random copolymer, an alternating copolymer, a block polymer, a diblock copolymer, a triblock copolymer, a

multiblock copolymer, a star-shaped block copolymer, and a graft block copolymer.

5. (Cancelled).

6. (Previously Presented) Method according to claim 1, wherein the copolymer of 1,3-trimethylene carbonate (TMC) is chosen from the group consisting of 1,3-trimethylene carbonate (TMC) (co)polymers with ϵ -valerolacton, 1,5-dioxepane-2-one, and -caprolactone.

7. (Previously Presented) Method according to claim 1, wherein the copolymer of 1,3-trimethylene carbonate (TMC) is poly(1,3,-trimethylene carbonate-co-, -caprolactone) (poly(TMC-CL)).

8. (Previously Presented) Method according to claim 1, wherein the actinic radiation is chosen from the group consisting of gamma radiation, high-energy UV radiation and electron radiation, preferably gamma radiation.

9. (Previously Presented) Method according to claim 1, wherein the actinic radiation is gamma radiation and the irradiation dosage is 5-100 kGy.

10. (Previously Presented) Method according to claim 1, wherein the inert atmosphere is obtained by use of a reduced pressure of less than 10^4 Pa.

11. (Previously Presented) Method according to claim 1, wherein the inert atmosphere is obtained by use of an inert gas.

12. (Previously Presented) Method according to claim 1, wherein a creep rate of the provided shaped biodegradable elastomeric structure is less than 10% of the yield stress.

13. (Previously Presented) Method according to claim 1, wherein a degree of swelling of the provided shaped biodegradable elastomeric structure is less than 400% in chloroform.

14. (Previously Presented) Method according to claim 1, wherein a gel fraction of the provided shaped biodegradable elastomeric structure is more than 10% by weight.

15. (Previously Presented) Method according to claim 1, further comprising sterilizing the provided shaped biodegradable elastomeric structure.

16. (Previously Presented) Shaped biodegradable elastomeric structure obtainable by a method according to claim 1.

17. (Previously Presented) A method, comprising:
using a shaped biodegradable elastomeric structure according to claim 16 in or as at least one of an implant, a matrix and a support device.

18. (Previously Presented) A medical implant, comprising:
a shaped biodegradable elastomeric structure according to claim 16.

19. (Previously Presented) Method according to claim 1, wherein the at least one of the homopolymer and copolymer of 1,3-trimethylene carbonate (TMC) includes a number average molecular weight (M_n) between 10,000 to 300,000.

20. (Previously Presented) Method according to claim 1, wherein the at least one of the homopolymer and copolymer of 1,3-trimethylene carbonate (TMC) includes a number average molecular weight (M_n) between 50,000 to 200,000.

21. (Previously Presented) Method according to claim 1, wherein the actinic radiation is gamma radiation and the irradiation dosage is 10-45 kGy.
22. (Previously Presented) Method according to claim 1, wherein the sterilizing of the provided shaped biodegradable elastomeric structure is done in an autoclave.
23. (Previously Presented) A matrix, comprising:
a shaped biodegradable elastomeric structure according to claim 16.
24. (Previously Presented) A support device, comprising:
a shaped biodegradable elastomeric structure according to claim 16.